



**FIELD SAMPLING PLAN
SOIL GAS SAMPLING ACTIVITIES
VIP CLEANERS
MORRISTOWN, MORRIS COUNTY, NEW JERSEY**

Prepared for:

**U.S. Environmental Protection Agency
Region 2
New York, New York 10007**

Prepared by:

**Region 2 Site Assessment Team 2
Weston Solutions, Inc.
Edison, New Jersey 08837**

EPA Contract No. EP-W-05-048

March 2006

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DCN: SAT2.20113.013.123

March 2006

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1.0 INTRODUCTION

Presented herein is the Field Sampling Plan (FSP) for soil gas sampling field activities to be conducted at the VIP Cleaners (VIP) site (CERCLIS ID No. NJD982744740) by the Weston Solutions, Inc. (WESTON®) Region 2 Site Assessment Team 2 (SAT 2). This site-specific FSP has been developed at the request of the United States Environmental Protection Agency (EPA) in accordance with the EPA Region 2 CERCLA Quality Assurance Manual (October 1989) and the SAT 2 Quality Assurance Project Plan (QAPP) (December 2005).

The sampling strategy presented in this plan emphasizes the collection of samples required to evaluate volatilization of soil and ground water contaminants previously detected at and near the site. The sampling will be conducted in accordance with the New Jersey Department of Environmental Protection (NJDEP) Vapor Intrusion Guidance (October 2005). The sampling plan includes the following sections: Site Reconnaissance (2.0), Sampling Visit and Sampling Procedures (3.0), Quality Assurance/Quality Control (4.0), and Field Changes and Corrective Actions (5.0). Additional quality assurance specifications can be found in the SAT 2 QAPP (December 2005), which is included by reference.

1.1 Site Description

The VIP Cleaners site is located at 89 Morris Street, Morristown, New Jersey (Figure 1). The site consists of a dry-cleaning facility and contaminated ground water associated with the dry-cleaning operations. The facility was used for dry cleaning from the early 1940s until 1970 by the property owner doing business as Caroline Laundry, and since 1989 by VIP Cleaners (1989-1996), Milano French Cleaners (1996-2000), and New Image Cleaners and Tailoring (2000-present). The former and current operators have used and continue to use chlorinated solvents, including tetrachloroethylene (PCE), for dry-cleaning operations at the facility.

Caroline Laundry, which included common laundering as well as dry cleaning, occupied the entire on-site building during its operation. Since Caroline Laundry ceased to operate and the building was divided for lease in 1970, businesses operating in portions of the building have included the aforementioned dry cleaners, a camera store, a lawnmower repair shop, auto repair shops, a computer store, hair salons, an auto detailing shop, a florist/garden center, a taxi and limousine service, an insurance sales office, a fish market, fitness facilities, and a photography studio. The dry-cleaning operations since 1989 have occupied only the northern portion of the building.

1.2 Previous Work at the Site

In February 1992, the property owner removed a 7,000-gallon underground storage tank (UST) and its contents (#6 heating oil). The tank had been located along the western side of the on-site building. The presence of a petroleum sheen on ground water within the UST excavation prompted NJDEP to require installation and sampling of a monitoring well at the old tank location. In response to the requirement, the property owner installed monitoring well MW-1 adjacent to the former UST location in September 1992. The well has its screened interval from 12 to 22 feet below ground surface (bgs).

Ground water samples collected from MW-1 by the property owner in September 1992 and by NJDEP in June 1994 indicated the presence of PCE and some of its breakdown products, trichloroethylene (TCE) and 1,2-dichloroethylene (DCE), at individual concentrations ranging from 58 to 3,000 micrograms per liter ($\mu\text{g/L}$). The depth to ground water in the well was measured at 4 feet bgs during the 1994 sampling event. The only sample collected to date that demonstrates background conditions was direct-push ground water sample GW-1, which was collected by NJDEP in June 1994. Sample GW-1 was collected from 10 to 12 feet bgs at a location west of the dry-cleaning facility and northwest of monitoring well MW-1. The contaminants of concern (PCE, TCE, and 1,2-DCE) were not detected in that sample.

Region 2 SAT 2 employed direct-push drilling methods to collect soil and ground water samples at and in the vicinity of the site in November and December 2005. The analytical results of that sampling event demonstrate that PCE, TCE, cis-1,2-DCE, and vinyl chloride are present in shallow soil and ground water at the site. The contamination exists in the immediate vicinity of the on-site building, which is occupied by several businesses, and has migrated beneath at least one nearby residential property. The highest concentrations were detected in the borehole closest to the dry-cleaning machine at the facility, where PCE was detected at concentrations as high as 18,000 micrograms per kilogram ($\mu\text{g/kg}$) in soil and 19,000 $\mu\text{g/L}$ in ground water.

The ground-water results for the VIP Cleaners site significantly exceed the generic Ground Water Screening Level (GWSL) of 1 $\mu\text{g/L}$ for PCE presented in the NJDEP Vapor Intrusion Guidance. The results also exceed GWSLs for cis-1,2-DCE; 1,2-dichloropropane (DCP); TCE; and vinyl chloride. Exceedances of GWSLs indicate that further evaluation of the vapor intrusion pathway is necessary, with the next step in the process being soil gas sample collection.

1.3 Schedule

The tentative schedule for the VIP soil gas sampling is:

<u>Proposed Start Date</u>	<u>Activity</u>	<u>End Date</u>
March 7, 2006	Soil Gas Sampling	March 10, 2006

The following personnel are tentatively scheduled to work on this project:

<u>Personnel</u>	<u>Responsibility</u>
Gerry Gilliland	Project Manager, QA/QC Officer
Michele Capriglione	Site Health and Safety Officer (SHSO), Global Positioning System (GPS) Data Collection, Sampler
Dan Gaughan	Sampler, Sample Management Officer (SMO)
Kerri Farrar	Sampler

2.0 SITE RECONNAISSANCE

The Region 2 Site Assessment Team (SAT) conducted an on-site reconnaissance on May 25, 2005 to evaluate current tenant operations, screen the site for health and safety considerations such as overhead wires, and ascertain potential sampling locations. The current tenant operations include dry cleaning using PCE, and other commercial businesses. Region 2 SAT interviewed the owner of New Image Cleaners and Tailoring, who informed us that VIP Cleaners left its dry-cleaning machinery behind when it vacated the premises. The next operator, Milano French Cleaners, replaced the dry-cleaning machine, and New Image continues to use PCE in that machine. The operation generates eight to ten 13-gallon drums of waste liquid PCE per year. The waste PCE goes directly from the dry-cleaning machine into the 13-gallon drums, which are subsequently picked up and shipped for proper disposal by a certified waste handler.

During the May 2005 reconnaissance, Region 2 SAT observed overhead wires at the southwest corner of the on-site building. There are also overhead wires on the opposite (east) side of the building. Region 2 SAT observed monitoring well MW-1 in the roadway just west of the building; the well cover was intact at the time of the on-site reconnaissance.

3.0 SAMPLING EVENT AND SAMPLING PROCEDURES

The ground-water samples collected in November and December 2005 indicated the presence of PCE and related compounds at concentrations exceeding the GWSL values presented in the NJDEP Vapor Intrusion Guidance. For example, PCE was detected in ground water at concentrations up to 19,000 µg/kg, whereas the GWSL is 1 µg/L. The same compounds were detected at high concentrations in shallow, unsaturated soil. Therefore, EPA will further evaluate the potential vapor intrusion impacts through the collection and analysis of soil gas samples. Exact sample locations will be determined at the beginning of the sampling event based on property access negotiations.

This section outlines overall sample management and control procedures to be implemented by Region 2 SAT 2 personnel during field activities. Analytical methods, preservation, holding times, and sample containers are summarized in Table 1.

3.1 Sample Tracking System

3.1.1 Sample Identification System

Region 2 SAT 2 will collect soil gas samples at and in the vicinity of the subject property, an indoor air sample from the dry-cleaning facility, and an ambient air sample for comparison. Proposed sampling locations will be presented prior to the sampling event. Each sample collected by Region 2 SAT 2 will be designated by a code that will identify the site; the code for the VIP Cleaners site is VIP. The media type will follow the site code. A hyphen will separate the site code and media type. Specific media types are as follows:

SG - Soil Gas

IA - Indoor Air

AA - Ambient Air

After the media type, the sample numbers will be listed; sample numbers will be identified as to their location on the sample location map. An example sample ID for the soil gas sampling activity is VIP-SG01. A duplicate sample will be identified in the same manner as other samples and will be distinguished and documented in the field logbook.

3.1.2 Sample Canisters

Sample canisters will be obtained from the subcontract laboratory, which will be chosen via a competitive bid process. The sample canisters will meet all guidelines specified in OSWER Directive 9240.0-05A, Specifications and Guidance for Obtaining Contaminant-Free Sample Containers (December 1992) and the NJDEP Vapor Intrusion Guidance (October 2005).

3.1.3 Sample Packaging and Shipping

Samples will be packaged and shipped according to the EPA Contract Laboratory Program (CLP) Guidance for Field Samplers (August 2004) and the NJDEP Vapor Intrusion Guidance (October 2005). Traffic report (TR)/chain-of-custody (COC) forms, sample labels, custody seals, and other sample documents will be completed as specified in the above-referenced manual. All entries will be made in permanent ink. If errors are made when completing any of these forms, the error will be crossed out with a single line, initialed, and dated by the sampler. Each environmental sample will be properly identified and sealed with a signed custody seal. The canisters shall then be placed in shipping containers with sufficient non-combustible cushioning material to minimize the possibility of container damage. Each shipping container will be sealed with packing tape and additional custody seals. All samples will either be hand-delivered or shipped via common carrier to the laboratory within 24 hours of collection. Sample shipment will conform to WESTON's Manual of Procedures for Shipping & Transporting Dangerous Goods, Section 1, subsections 1.0, 2.0, and 2.1 (Appendix A) and the most current International Air Transport Association (IATA) Dangerous Goods Regulations. Information relating to the shipment of samples, including the airbill number, sample quantity, and sample types, will be reported to EPA via the Analytical Services Tracking System (ANSETS) upon completion of the sampling event.

3.1.4 Sample Documentation

The sampling team or individual performing the sampling activity will maintain a field logbook. The bound, numbered, and paginated logbook shall be filled out at the location of sample collection immediately after sampling. The logbook shall contain sampling information, including: sample number, sample collection time, sample location, sample descriptions, sampling methods, weather conditions, field measurements, name of sampler, site-specific observations, and any deviations from protocol. All entries will be entered legibly in permanent ink. If errors are made when completing this logbook, the error will be crossed out with a single line, initialed, and dated by the sampling team. Region 2 SAT 2 will use GPS to record sample and other site feature locations electronically, and will include a description of the GPS data collection and site identifiers in the field logbook.

3.2 Sampling Program

Region 2 SAT 2 will collect an estimated total of 12 soil gas samples, one indoor air sample, and one ambient air sample for laboratory analysis. The sample locations are shown in Figure 2. All the soil gas samples will be collected at a depth of 5 feet below ground surface, if conditions allow.

Samples will be analyzed via EPA Method TO-15 for the following site-related volatile organic compounds (VOC): cis-1,2-DCE; 1,2-DCP; PCE; TCE; and vinyl chloride. Site-specific sample analyses, bottle types, and sample preservatives are presented in Table 1. A description of proposed site-specific samples, including the rationale for the collection of each sample, is presented in Table 2. Table 3 contains a list of the number of bottles for each sample, analyses to be performed, and preservation methods. Additional samples might be collected if deemed necessary while in the field.

Region 2 SAT 2 and the EPA Regional Sample Control Coordinator (RSCC) have implemented the Field and Analytical Services Teaming Advisory Committee (FASTAC) analytical services strategy according to *SOP No. HW-32: Standard Operating Procedure for Implementing the National Strategy for Procuring Analytical Services for All OSWER Programs, Revision 5* (EPA Region 2, March 2005), which requires coordination of all analytical services through the RSCC. The RSCC has informed Region 2 SAT 2 that Tier 4 (Contractor subcontract laboratory) will be the means of analysis for this task.

The following laboratory will provide the following analyses:

<u>Lab Name/Location</u>	<u>Sample Type</u>	<u>Parameters</u>
Pace Analytical Services, Inc. 1700 Elm Street, Suite 200 Minneapolis, MN 55414	Soil Gas; Indoor Air; Ambient Air	VOCs via EPA TO-15: cis-1,2-DCE 1,2-Dichloropropane PCE TCE Vinyl chloride (7-day turnaround to Weston)

Listed below are standard operating procedures which the Region 2 SAT 2 sampling team will follow during field sampling activities at the VIP site. All sampling activities will be conducted in a manner consistent with current EPA Region 2 guidelines.

3.2.1 Surface and Subsurface Soil Sampling

Region 2 SAT 2 will not collect soil samples during this sampling event.

3.2.2 Ground water Sampling (Direct-Push)

Region 2 SAT 2 will not collect ground water samples during this sampling event.

3.2.3 Water Supply Well Sampling (Tap Water)

Region 2 SAT 2 will not collect tap water samples during this sampling event.

3.2.4 Surface Water Sampling

Region 2 SAT 2 will not collect surface water samples during this sampling event.

3.2.5 Sediment Sampling

Region 2 SAT 2 will not collect sediment samples during this sampling event.

3.2.6 Stream Water Flow Measurement

Region 2 SAT 2 will not perform stream water flow measurements during this sampling event.

3.2.7 Drum Sampling Procedures

Region 2 SAT 2 will not collect drum samples during this sampling event.

3.2.8 Soil Gas Sampling Procedures

The following procedures apply to the collection of soil gas samples (depth = 5 feet) for this project, in accordance with the NJDEP Vapor Intrusion Guidance (October 2005):

- 1) Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new outer sampling gloves prior to sampling at each location.
- 2) Drill a 3/8"-diameter hole (through asphalt or concrete, if necessary) to a total depth of 5 feet below ground surface.
- 3) Insert the vapor probe (3/8" tubing made of Teflon or similar material) into the hole. Wrap the tubing with Teflon tape to create a snug fit when the tubing is twisted into the hole.
- 4) After inserting the vapor probe flush with the ground surface, add a non-volatile emitting surface sealing material (e.g., modeling clay or beeswax) to seal the annular space.
- 5) Connect the vapor probe to a "T" fitting made of inert material and an in-line valve.
- 6) Use inert tubing to connect the "T" fitting to the sample canister at one end and the other end attached to a vacuum pump.
- 7) Purge three volumes through the vapor probe and sampling lines, at a low purge rate with a maximum of 200 mL/minute. The purging volume is calculated as follows
$$\text{Purge volume} = 3\pi r^2 h$$
where r is the inner radius of the probe and connecting tubing, and h is the length of the probe and connecting tubing.
- 8) Close the valve on the vacuum pump line.
- 9) Open the valve to collect the soil gas sample.
- 10) Backfill boreholes with soil or cement as necessary.

- 11) Place samples in the shipping container. Samples will be hand-delivered or shipped within 24 hours of collection to the designated laboratory.
- 12) Fill out field logbook, custody seals, sample labels, and TR/COC forms. Include in the logbook a detailed description of the specific conditions at each sample location, including type and thickness of all layers encountered (e.g., asphalt or concrete, sub-base, and soil), general condition of the concrete or asphalt, and presence/absence of water.

3.2.9 Indoor Air and Ambient Air Sampling Procedures

The following procedures apply to the collection of indoor and ambient (outdoor) air samples for this project, in accordance with the NJDEP Vapor Intrusion Guidance (October 2005):

- 1) Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new outer sampling gloves prior to sampling at each location.
- 2) Set the canister in the appropriate location designated by EPA.
- 3) Open the regulator for collection of a 6-liter sample over a 1-hour period.
- 4) Upon completion of the sampling period of 1 hour, close the sample canister.
- 5) Place samples in the shipping container. Samples will be hand-delivered or shipped within 24 hours of collection to the designated laboratory(ies).
- 6) Fill out field logbook, custody seals, sample labels, and TR/COC forms.

3.3 Decontamination

The NJDEP Vapor Intrusion Guidance (October 2005) does not require equipment decontamination for soil gas, indoor air, and ambient (outdoor) air sampling. Region 2 SAT 2 will use a dedicated vapor probe (tubing) and "T" setup for each sampling location. The laboratory will provide a separate regulator with each Summa canister.

4.0 QUALITY ASSURANCE/QUALITY CONTROL

This section details the Quality Assurance/Quality Control (QA/QC) requirements for field activities performed during the sampling effort.

4.1 Field Instrument Calibration and Preventive Maintenance

The sampling team is responsible for assuring that a master calibration/maintenance log will be brought into the field and maintained for each measuring device. Each log will include at a minimum, where applicable:

- name of device and/or instrument calibrated
- device/instrument serial and/or ID number
- frequency of calibration
- date of calibration
- results of calibration
- name of person performing the calibration
- identification of the calibrant (PID, FID, pH meter)

Equipment to be used each day shall be calibrated prior to the commencement of daily activities.

4.2 QA/QC Sample Collection

This section describes the QA/QC samples that will be collected by the Region 2 SAT 2 field team as part of the sampling effort. A summary by sample number for analysis, bottle type, and preservation is presented in Table 3.

4.2.1 Trip Blanks

Trip blanks are defined as canisters that are prepared at the laboratory, shipped to the investigator, and shipped back to the laboratory unopened. The NJDEP Vapor Intrusion Guidance (October 2005) does not require the collection of trip blank canisters for any Method TO-15 sampling event. Therefore, Region 2 SAT 2 will not collect trip blanks during the soil gas sampling event.

4.2.2 Field Rinsate Blanks

Field rinsate blanks are not required for the soil gas sampling event.

4.2.3 Deionized Water Blanks

Deionized water blanks are not required for the soil gas sampling event.

4.2.4 Duplicate Samples

NJDEP does not require the collection of Field Duplicates for Method TO-15. NJDEP has instituted the use of Laboratory Control Sample instead.

4.2.5 Split Samples

Splitting of samples will be conducted upon request when the site owner/operator or potentially responsible party (PRP) wishes to ensure that sample results generated by Region 2 SAT 2 are accurate. Region 2 SAT 2 is not responsible for supplying the necessary amount of sample containers for the site owner/operator. It is not necessary to assess the site owner/operator laboratory performance or laboratory methods used, although the methods should be of equivalent performance. The site owner/operator will be informed that split samples are to be analyzed at their own expense.

Soil gas, indoor air, and ambient (outdoor) air samples collected for volatile organic analysis may not be split. In this instance, samples must be collected as co-located grabs.

4.2.6 Background Samples

In order to accurately assess any potential contamination on the site, two background samples for each pathway matrix of concern will be collected. Soil gas, indoor air, and ambient air samples are all considered to be the same matrix (Air). The analysis of each sample will be equal to those specified for the environmental samples. For the purposes of site assessment projects, background samples will be collected from locations not suspected to be affected by site activities; selection of the background sample locations will be based on field observation, available site information, and professional judgement.

4.2.7 Data Validation

Data validation will not be conducted for the samples collected during the soil gas sampling activities. The NJDEP Vapor Intrusion Guidance (October 2005) does not require validation of Method TO-15 analyses.

5.0 FIELD CHANGES AND CORRECTIVE ACTIONS

The SAT 2 Project Manager (PM) or his/her designee may be required to modify generic site procedures to accommodate site-specific needs or unforeseeable events. In the event it becomes necessary to modify a procedure, the PM will notify the EPA Region 2 WAM. Deviations from the Field Sampling Plan will be documented in the field logbook and signed by the initiator and the PM.

FIGURES

TABLES

APPENDIX B

NJDEP: Vapor Intrusion Guidance, October 2005

APPENDIX A

**Weston Solutions, Inc.: Manual of Procedures for Shipping and Transporting Dangerous Goods
(excerpts)**

TABLE 3
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
SOIL GAS SAMPLING EVENT
VIP CLEANERS SITE, MORRISTOWN, NEW JERSEY

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
VIP-SG01	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG02	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG03	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG04	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG05	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG06	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG07	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG08	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG09	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG10	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG11	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-SG12	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-IA01	One 6-Liter Summa canister	TO-15 VOCs	None required
VIP-AA01	One 6-Liter Summa canister	TO-15 VOCs	None required

TABLE 2
SAMPLE DESCRIPTIONS/RATIONALE
SOIL GAS SAMPLING EVENT
VIP CLEANERS SITE, MORRISTOWN, NEW JERSEY

SAMPLE NUMBER	DESCRIPTION/RATIONALE
VIP-SG01	Soil gas sample along the west side of the subject building (89 Morris Street et al) for evaluation of volatilization of soil and ground water contaminants; depth: 5 feet.
VIP-SG02	Soil gas sample along the west side of the subject building (89 Morris Street et al) for evaluation of volatilization of soil and ground water contaminants; depth: 5 feet.
VIP-SG03	Soil gas sample along the west side of the subject building (89 Morris Street et al) for evaluation of volatilization of soil and ground water contaminants; depth: 5 feet.
VIP-SG04	Soil gas sample along the east side of the subject building (89 Morris Street et al) for evaluation of volatilization of soil and ground water contaminants; depth: 5 feet.
VIP-SG05	Soil gas sample along the east side of the subject building (89 Morris Street et al) for evaluation of volatilization of soil and ground water contaminants; depth: 5 feet.
VIP-SG06	Soil gas sample from the backyard of the residential property at 36-38 Pine Street, for evaluation of volatilization and migration of soil and ground water contaminants just south of the subject building; depth: 5 feet.
VIP-SG07	Soil gas sample from the right-of-way lane located south of 34 Pine Street, for evaluation of volatilization and migration of soil and ground water contaminants south of the subject building; depth: 5 feet.
VIP-SG08	Soil gas sample along Pine Street southeast of the subject building, for evaluation of volatilization and migration of soil and ground water contaminants; depth: 5 feet.
VIP-SG09	Soil gas sample along Pine Street southeast of the subject building, for evaluation of volatilization and migration of soil and ground water contaminants; depth: 5 feet.
VIP-SG10	Soil gas sample along Pine Street south of the subject building, for evaluation of volatilization and migration of soil and ground water contaminants; depth: 5 feet.
VIP-SG11	Soil gas sample north of the subject property (Block 4801, Lot 11), for evaluation of background conditions; depth: 5 feet.
VIP-SG12	Soil gas sample north of the subject property (Block 4801, Lot 11), for evaluation of background conditions; depth: 5 feet.
VIP-IA01	Indoor air sample from the current dry-cleaning facility (New Image Cleaners) to evaluate the impact of current operations on indoor air quality at the facility.
VIP-AA01	Ambient (outdoor) air sample to assess ambient air quality in the vicinity of the site.

Additional samples may be added or deleted depending on further investigation.

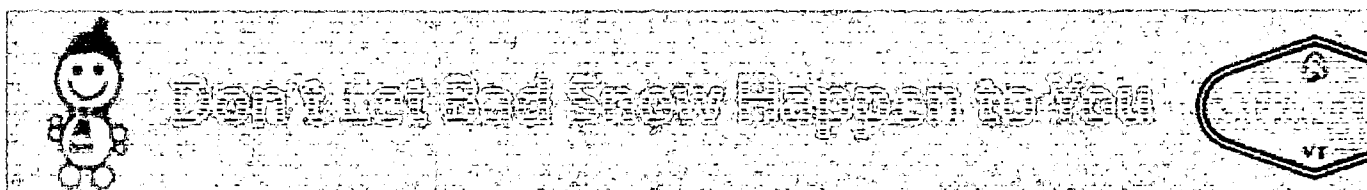
TABLE 1
NON-CLP ANALYTICAL SERVICES
SOIL GAS SAMPLING EVENT
VIP CLEANERS SITE, MORRISTOWN, NEW JERSEY

Sample Type	Number of Samples	Matrix	Sampling Device	Sample Container ⁽¹⁾	Sample Preservation	Technical Holding Time ⁽²⁾	Laboratory Analysis
Soil Gas	12	Air	Stainless-steel and Teflon soil gas sampling probe	One 6-liter Summa canister	N/A	30 days	VOCs by EPA Method TO-15: cis-1,2-DCE 1,2-DCP PCE TCE vinyl chloride
Indoor Air	1						
Ambient (Outdoor) Air	1						

⁽¹⁾ = Sample containers are certified clean by the laboratory.


⁽²⁾ = Technical holding times are calculated from the date of sample collection.


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3/2/2006









MAPQUEST

 **2890 Woodbridge Ave**
Edison, NJ 08837-3602, US

 **89 Morris St**
Morristown, NJ 07960-4154, US

Total Est. Time:
40 minutes

Total Est. Distance:
38.04 miles

Maneuvers	Distance
 1: Start out going NORTHEAST on CR-514 E / WOODBRIDGE AVE.	<0.1 miles
 2: Turn SLIGHT RIGHT onto S MAIN ST.	0.6 miles
 3: Merge onto US-1 N toward I-287.	0.5 miles
 4: Merge onto I-287 N toward MORRISTOWN / MAHWAH.	36.0 miles
 5: Take the CR-510 W / LAFAYETTE AVE exit- EXIT 36B.	0.1 miles
 6: Stay STRAIGHT to go onto CR-510 W / LAFAYETTE AVE.	0.5 miles
 7: Turn RIGHT onto CR-510 / MORRIS ST.	<0.1 miles
 8: End at 89 Morris St Morristown, NJ 07960-4154, US	

Total Est. Time: 40 minutes

Total Est. Distance: 38.04 miles